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GROUP 1
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TCS-10316/71
5 February 1971

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MEMORANDUM FOR: Chief, Technical Services Group, NPIC

ATTENTION : Chief, PPS/TSG

SUBJECT : RED Monthly Report (January 1971)

Significant Items of Interest for January 1971:

1. Contact Lens Evaluation - ATB [REDACTED] has prepared a status report on the technical feasibility of prescribing contact lenses to a select number of photointerpreters. Center management has been requested to grant permission for the next phase of the program to begin.

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2. OSI, NPIC Stereo Acuity Research Program - Nearly 100 IEG photointerpreters and 75 PSG personnel have served as subjects during January in the stereo acuity study. Data collection should be completed by 19 February. Preliminary data analysis is underway.

3. [REDACTED] Image Interpretation Research Program - ATB/HPS and [REDACTED] personnel held extensive discussions with TSG and IEG management and support personnel regarding the search improvement, training, and exploitation of color photography aspects of the IIRP.

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4. [REDACTED] - Digital Image Manipulation - ATB [REDACTED] and ATB [REDACTED] personnel, plus several human factors consultants [REDACTED]

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[REDACTED] visited the [REDACTED] DIM facility for a thorough review of FY-71 research activities. Specific recommendations were developed governing the program for evaluation of the manipulated imagery.

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5. Computer Center Noise Exposure and Criteria Determination - ATB [REDACTED] personnel are coordinating efforts for OMS to establish an acceptable level of exposure to noise generated by NPIC's computer hardware. ESD personnel recently conducted a study of the noise levels and extent of personnel exposed to search noise, but the selection of exposure criteria, it is felt, lies properly with OMS.

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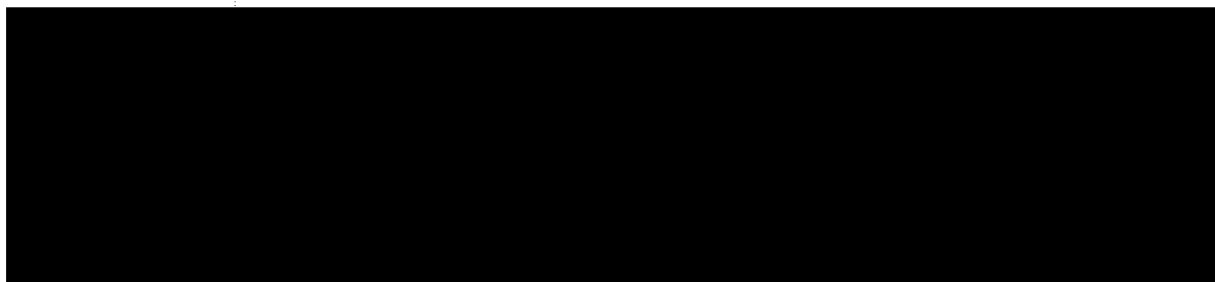
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8. Coordination Visit to Naval Photographic Center - ATB/EL personnel visited [REDACTED] at NPC to discuss R&D activities of mutual interest.

9. Color Sensitometric Processor - Fabrication of the Color Sensitometric Processor has begun at [REDACTED] all appears on schedule.

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10. Viscous Development - Early results from the viscous development investigations yielded large adjacency effects with two of the three viscous agents under investigation; the third has yet to be tested.

11. Power Spectral Density - [REDACTED] - The contractor completed the technical work approximately three months ahead of schedule. Image quality tests on operational imagery proved to be highly successful. A final report is currently being prepared.

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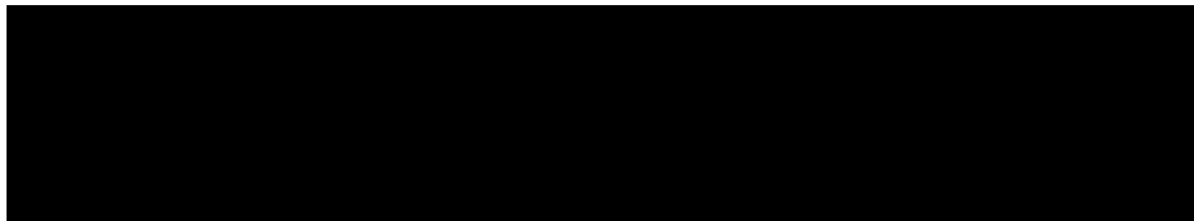
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13. Low Contrast Imagery for Optics/ORD/DDS&T - Seven low contrast scenes of operational imagery were selected, printed, and forwarded to [REDACTED] Ch/Optics/ORD/DDS&T. This imagery will be used to demonstrate the scatter light device and multiple reflection viewer developed by [REDACTED]. A demonstration for RED personnel is scheduled for the near future.



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16. Demonstration of OTF/MTF Device

[REDACTED] of ATB attended a successful demonstration of the National Bureau of Standards' OTF/MTF Device on 29 January 1971. [REDACTED] of NBS performed the demonstration.

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17. High Precision Stereo Comparator (HPSC) - All the electrical, mechanical, and optical fabrication work has been completed. The computer programming is presently being tested and modified to accommodate operational imagery. If no major problems arise, the operational suitability tests will be performed at the [REDACTED] plant in mid-February.

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18. Scan and Search PI Station - This program is running ahead of the planned schedule. [REDACTED] the optical subcontractor, expects to have the optics ready for delivery in July 1971.

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19. 1540 Light Table - Serial Number 1 table has passed the acceptance test in all respects except for the color of the light source. [REDACTED] and the light source vendor are trying to resolve this problem. To date, 72 production 1540 light tables have been delivered to the Center.

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20. Calibration Device for the HPSC. - Several tests have been made on the HPSC at the [REDACTED] plant. The repeatability of the calibration device is very good. Additional tests will be performed to obtain statistical data.

21. Basic Research in Precise Measurement - Tests and demonstrations of an automatic pointing technique for mensuration have been encouraging. Indications are that this could be a very effective approach for future instruments.

22. Filar Eyepiece for the Zoom 240 - The prototype instrument was delivered to the Center, but it was rejected by the monitor. Difficulty was encountered in clamping the instrument to the Zoom 240.

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23. Vibration Tests - RED/SDB personnel had several meetings with representatives of the Office of Logistics and [REDACTED] in regard to the vibration tests being carried out in the vicinity of [REDACTED]

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24. Logistics has had a new thermostat and mix box installed in the room housing the Target Indexing Device. Indications, thus far, are that the temperature control problem has been brought to within workable limits.

25. The final report on unconventional materials was distributed within NPIC.

28. Work was commenced on the preparation of a briefing regarding the role of RSB in the planning and preparation for an NRT EOI system.

29. [REDACTED] obtained the assistance of the [REDACTED] experts in setting up a breadboard holograph reader at NPIC to be used for experimenting in viewing [REDACTED] imagery for image manipulation purposes. The [REDACTED] has offered to do it at no cost.

30. Proposals and Contracts:

- a. Color Processing Support and Color Technology Support - PAR's for these programs with [REDACTED] have been approved by Dir/NPIC.

c. The FY-71 Task for Photoscience Support was issued to [REDACTED]. Two work orders were authorized: (1) training in electron microscopy, and (2) evaluation of the Staley Color Proofing Process.

d. The Color Equipment Investigation Program PAR has been briefed through C/TSG. The draft memorandum is presently under review by DC/RED/TSG.

e. [REDACTED], demonstrated their proprietary image contrast doubling technique to RED. A proposal is under consideration to fund work in this area.

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- f. Proposals have been received from six contractors for a high intensity light source for the 1540 light tables. The proposals are presently being evaluated.
- g. Proposals have been solicited from contractors for an MTF Analyzer for [REDACTED]
- h. Two projects with the [REDACTED] have been approved and are in the negotiation stage. The projects are the Dry Silver Program and the modification of the RIPP tables.
- i. The PAR for the Lenticular Screen has been sent forward for approval.
- j. Development Objectives for the Non-Computerized Information Handling Study have been approved by the C/PSG, and have been sent out for solicitation of proposals.
- k. [REDACTED] has filed suit on Contract [REDACTED] contesting our termination for failure to perform.
- l. Requests for proposals have been submitted to industry for "Assessing the Quality of the State-of-the-Art of CRT's."
- m. Proposals have been received for an "Automated Coordinate Display System" and are under evaluation.

31. Meetings and Briefings:

- a. [REDACTED] briefed the ExDir/NPIC and the Group Chiefs on renewal of the [REDACTED] Digital Image Manipulation contract.
- b. ATB personnel presented a comprehensive briefing on Branch activities to members of NPIC upper and middle management. The briefing was presented to small groups in several sessions.
- c. Color Training [REDACTED] - Extensive Center orientation briefings by IEG, PSG, and TSG representatives were held for [REDACTED] personnel. In addition, an on-site visit was made to [REDACTED] to review the color photography research efforts being conducted under the Image Interpretation Research Program--which has application to [REDACTED] activities.

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d. [REDACTED] participated in the following activities:

- (1) Attended several sessions on a special project directed by [REDACTED]
- (2) Received briefing on the preparation of an NPIC Training Manual and began initial groundwork for this publication.
- (3) Attended the COMIREX MC&G Working Group meeting concerning the use of the remaining KH-4 missions for mapping [REDACTED]

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e. [REDACTED] attended numerous meetings on [REDACTED] and confirmed plans and preparations for the Center's exploitation evaluation which will begin early in March. Following this, he briefed the Director/NPIC and his Staff, PSG, and IAS on the [REDACTED] program.

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f. [REDACTED] briefed the ODir/NPIC, the Groups Chiefs and their deputies, the [REDACTED] and OSR/CIA representatives on the [REDACTED]. This briefing included various special aspects such as data base requirements, the data transmission system, and the status of the program.

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g. [REDACTED] participated in the following meetings:

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- (1) [REDACTED]
- (2) At [REDACTED] regarding:
 - a) The scheduling of the [REDACTED] sensors into the remaining KH-4 missions [REDACTED]
 - b) The [REDACTED] Attitude Device Test Plan, where the interface requirements for exploitation were developed.
 - c) The stellar index camera calibration requirements.

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- 25X1D h. An [redacted] P.I. work station R&D program briefing has
25X1A been given to the Group Chiefs. It will be presented
25X1A to [redacted] in the near future.
- i. [redacted] gave a briefing in
which they reviewed some new ideas for development
programs.

32. Personnel:

- 25X1A a. [redacted] has been assigned as interim
technical monitor of the [redacted] Image Interpretation
Research Program, vice [redacted] (reassigned). 25X1A
25X1A b. [redacted] is now technical monitor of the
25X1A [redacted] Image Exploitation Support Program,
- c. [redacted] temporarily assigned to ATB/
[redacted] as a research assistant, is currently participating
in the Stereo Acuity Research Program along with three
DIA personnel.

[redacted] 25X1A
Deputy Chief,
Research & Engineering Division,
TSG/NPIC

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